JS 10/21/21
RJA 01/06/22

SAT Report for Case # P-18-0068

General

[redacted]

Report Status:	Complete	**Status Date:**	12/20/2017		
CRSS Date:	12/21/2017	**SAT Date:**	12/22/2017	**SAT Chair:**	William Irwin
Consolidated PMN?					
Consolidated Set:					
Submitter:	[redacted]				
CAS Number:	[redacted]				
Ecotox Related Cases:					
Health Related Cases:	[redacted]				
Chemical Name:	[redacted]				
Use:	[redacted]				
Trade name:	[redacted]				
PV Max (kg/yr):	[redacted]				
Ecotox Assessor:	Frank Antwi	**Fate Assessor:**	Marcy Card	**Health Assessor:**	Chris Brinkerhoff

Physical Chemical Information

Molecular Weight:	[redacted]	**Physical State - Neat:**	[redacted]		
Percent 500:	[redacted]	**Percent 1000:**	[redacted]		
Melting Point (Measured):		**Melting Point (est):**		**MPD (EPI):**	
Vapor Pressure:		**Vapor Pressure (est):**	<0.000001	**VP (EPI):**	
Water Solubility:		**Water Solubility (EST):**	<0.000001/Reacts	**Water Solubility (EPI):**	
Log Kow:				**Log Kow (EPI):**	
Log P:		**Log P Comment:**			

SAT Concern

Ecotox Rating (1):	1	**Ecotox Rating Comment (1):**	
Ecotox Rating (2):		**Ecotox Rating Comment (2):**	
Health Rating (1):	1-2	**Health Rating Comment (1):**	Concern for lung overload
Health Rating (2):		**Health Rating Comment (2):**	

PBT Ratings

Persistence	Bioaccumulation	Toxicity	Comments
1	1	1	PMN
2	1	1	

Persistence	Bioaccumulation	Toxicity	Comments
3	*	1	Hyd Pdt [redacted] Hyd Pdt [redacted] deg

Exposure Based Review (Health)? N

Exposure Based Review (Ecotox)? N

SAT Lung, Irr- E, S.

Keywords: L

Fate Assessment Summary: P-18-0068
FATE: MW = [redacted] with [redacted] < 500 and [redacted] < 1000 [redacted]
S = Negligible / Reacts slowly
Hydrolysis
half-life = wk
VP < 1.0E-6 torr at 25 °C (E)
BP > 400 °C (E)

H < 1.00E-8 (E)
POTW removal (%) = PMN 90 via sorption and slow hydrolysis; then Hyd Pdt [redacted] 90

via sorption and biodeg; Hyd Pdt [redacted] deg 90 via sorption

Time for complete ultimate aerobic biodeg = Hyd Pdt [redacted] wk; Hyd Pdt [redacted] deg > mo
Sorption to soils/sediments = PMN strong; Hyd Pdt [redacted] strong; Hyd Pdt [redacted] deg

strong
PBT Potential: PMN P1B1; Hyd Pdt [redacted] P2B1; Hyd Pdt [redacted] deg P3B* (low)
*CEB FATE: Migration to ground water = PMN slow; Hyd Pdt [redacted] slow; Hyd Pd

[redacted] deg slow

Bioconcentration factor to be put into E-FAST: Hyd Pdt [redacted] = 100.

PMN Material:
Overall wastewater treatment removal is
90% via sorption and slow hydrolysis.
Sorption to sludge is strong
based on high molecular volume.
Air Stripping (Volatilization to
air) is negligible based on high molecular volume.
Removal by
biodegradation in wastewater treatment is negligible based on high molecular volume.
PMN Material:
Low Persistence (P1) is based on
slow hydrolysis (hydrolysis half-life: days to weeks).
Low
Bioaccumulation potential (B1) is based on slow hydrolysis (hydrolysis half-life: days to weeks).
Hydrolysis Product ([redacted]

Overall wastewater treatment removal is 90% via sorption and biodegradation.
Sorption to sludge is strong based on the estimated
physical-chemical properties from EPISUITE.
Air Stripping
(Volatilization to air) is negligible based on the estimated
physical-chemical properties from EPISUITE.
Removal by biodegradation
in wastewater treatment is high based on structure [redacted]).

The aerobic aquatic biodegradation half-life is weeks based on
structure [redacted]
The anaerobic aquatic biodegradation
half-life is months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is projected to be greater or equal to the aerobic biodegradation half-life.

Sorption to soil and sediment is strong based on the estimated
physical-chemical properties from EPISUITE.
Migration to groundwater
is slow based on the estimated physical-chemical properties from EPISUITE.

Hydrolysis Product ([redacted]
Moderate Persistence (P2) is
based on the anaerobic biodegradation half-life.
Low Bioaccumulation

potential (B1) is based on BCFBAF model estimates.
Hydrolysis
Product ([redacted]
Overall wastewater treatment removal is 90%
via sorption.
Sorption to sludge is strong based on structure
(inorganic metal oxide) and analogous chemicals.
Air Stripping
(Volatilization to air) is negligible based on structure (inorganic metal oxide) and analogous chemicals.
Removal by biodegradation in
wastewater treatment is negligible based on structure (inorganic metal oxide) and analogous chemicals.
The aerobic aquatic biodegradation
half-life is greater than months based on structure (inorganic metal oxide) and analogous chemicals.
The anaerobic aquatic biodegradation
half-life is greater than months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is projected to be greater or equal to the aerobic biodegradation half-life.

Sorption to soil and sediment is strong
based on structure (inorganic metal oxide) and analogous chemicals.

Migration to groundwater is slow based on structure (inorganic metal oxide) and analogous chemicals.
Hydrolysis Product ([redacted]
[redacted]:
High Persistence (P3) is based on the anaerobic biodegradation half-life and analogous chemicals.
Bioaccumulation potential
(B*-low) is based on analogous chemicals.

Bioconcentration/Bioaccumulation factor to be put into E-Fast:
[redacted] 100

Removal in WWT/POTW (Overall): 90;90;90

Condition	Rating Values w/ Rating Description	Comment
WWT/POTW Sorption:	3;3;3 4;4;4	

Condition	Rating Values w/ Rating Description	Comment
WWT/POTW Stripping:		
Biodegradation Removal:	4;2;4	
Biodegradation Destruction:		
Aerobic Biodeg Ult:	;2;4	
Aerobic Biodeg Prim:		
Anaerobic Biodeg Ult:	;3;4	
Anaerobic Biodeg Prim:		
Hydrolysis (t1/2 at pH 7,25C) A:	4	[redacted]
Hydrolysis (t1/2 at pH 7,25C) B:		
Sorption to Soils/Sediments:	2;2;2	
Migration to Ground Water:	2;2;2	PMN slow; Hyd Pdt [redacted] slow; Hyd Pd [redacted] deg slow
Photolysis A, Direct:		
Photolysis B, Indirect:		
Atmospheric Ox A, OH:		
Atmospheric Ox B, O3:		

Health Assessment

Health Summary: Expect poor absorption via all routes (pchem). Concerns for lung overload. SDS: concern for irritation to eyes, skin, lungs. Based on discussions at SAT, there is unlikely inhalation exposure to [redacted] in an occupational setting unless alkaline or acids conditions are present. To the extent [redacted] is bioavailable, some [redacted] compounds have caused skin sensitization in humans with

[redacted] salts having oral LD50 values over 1688 mg/kg (Ullmann's Ulmman's Encylopedia for Industrial Chemicals).

Routes of Exposure: Dermal Drinking Water Inhalation

Test Data Submitted

Test Data Submitted: For [redacted] [redacted], the LOAEL in a rat chronic study was 0.79 mg/kg/day based on increased cholesterol.

Ecotox Assessment

Test organism	Test Type	Test Endpoint	Predicted	Measured	Comments
Fish	96-h	LC50	*		
Daphnid	48-h	LC50	*		
Green Algae	96-h	EC50	*		
Fish	-	Chronic Value	*		
Daphnid	-	Chronic Value	*		
Green Algae	-	Chronic Value	*		

Factors	Most Sensitive Endpoint	Assessment Factor	CoC	Comment
Acute Acquatic:		5		*
Chronic Acquatic:		10		*

Ecotox Route of Exposure?	No releases to water

Factors	Values	Comments
SARs:	[redacted] Compounds	
SAR Class:	[redacted] Compounds-insoluble	
TSCA NCC Category?	[redacted] Compounds	

Recommended Testing

Ecotox
Value Comments

Predictions are based on analog data for [redacted] compounds; MW [redacted] with [redacted] < 1000; [redacted] with an unknown MP (P); S = negligible (P); effective concentrations based on 100% active ingredients and mean measured concentrations; hardness <150 mg/L as CaCO3; and TOC <2.0 mg/L.

Ecotox Factors Comments

Focus Report/Decision Document:
Environmental Hazard and Risk
(P-18-0068)

Environmental Hazard: Environmental hazard is relevant to whether a new chemical substance is likely to present unreasonable risks because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA estimated environmental hazard of this new chemical substance using hazard data on analogous chemicals. Based on these estimated hazard values from, EPA concludes that this chemical substance low environmental hazard.

· Substance falls within the TSCA New Chemicals Category of [redacted] Compounds
· SAR chemical class of [redacted] Compounds- insoluble.
· Low hazard based on no effects at saturation.

Environmental Risk:

· Risks were not identified for ecotoxicity.

Testing Recommendations:
· None